Serial No.: 10/533.663 Examiner: Omar Rolas

Title: DISPLAY ELEMENT AND DISPLAY DEVICE USING THE SAME

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

(Currently amended) A display element comprising a light source and a 1. waveguide that comprises a deformable core and propagates a light emitted from the light source, wherein the light propagated in the waveguide is extracted to outside the display element from a waveguide lateral face, and

the display element further comprising a plurality of actuators that deform a shape of the waveguide.

wherein the light is extracted out of the waveguide from the waveguide lateral face by changing a shape of the waveguide lateral-face the actuators are operated selectively to deform a surface shape of at least a portion of the core on the waveguide lateral face to a concavo-convex shape so as to change the reflection direction of light propagated in the waveguide thereby to extract the light out of the display element from the waveguide lateral face.

- 2. (Canceled)
- (Currently amended) The display element according to claim 1 [[2]], wherein the 3. waveguide comprises a core and a cladding formed along one lateral face of the core,

wherein the actuators are attached to the cladding and the shape of the waveguide lateral face is changed by deforming the actuators.

- 4. (Canceled)
- (Currently amended) The display element according to claim 1 [[2]], wherein the 5. actuators are attached to the waveguide lateral face, and

wherein the shape of the waveguide lateral face is changed by deformation of the actuators.

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6. (Currently amended) The display element according to claim 1 [[2]], wherein the actuators comprise a piezoelectric element, and

wherein the shape of the waveguide lateral face is changed by deforming the piezoelectric element by applying a voltage to the piezoelectric element.

- 7. (Currently amended) The display element according to claim 1 [[4]], wherein the actuators comprise: a first electrode film arranged at the waveguide lateral face,
 - a piezoelectric element layered on the first electrode film, and
 - a second electrode film layered on the piezoelectric element,

wherein the shape of the waveguide lateral face is changed by deforming the piezoelectric element by applying a voltage between the first electrode film arranged at the waveguide lateral face and the second electrode film layered on the piezoelectric element.

8. (Currently amended) The display element according to claim 1 [[2]], wherein the actuators comprise a convex portion, and

wherein the shape of the waveguide lateral face is changed by applying pressure to the waveguide lateral face with the convex portion.

9. (Currently amended) The display element according to claim 1 [[2]], wherein the actuators comprise: an electrode film arranged at the waveguide lateral face, and

an external electrode film that is in opposition to and adjacent to the waveguide,

wherein the shape of the waveguide lateral face is changed by an electrostatic force produced by applying a voltage between the external electrode film and the electrode film.

10. (Original) The display element according to claim 9, wherein the external electrode film comprises a convex portion at the waveguide lateral face, and a shape of the waveguide lateral face is changed by the convex portion of the external electrode film

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applying pressure to the waveguide lateral face by using the electrostatic force.

- 11. (Currently amended) The display element according to claim 1 [[2]], wherein the light is extracted out of the waveguide by deforming at least a portion of the core of the waveguide.
- 12. (Currently amended) The display element according to claim 1 [[2]], wherein at least a portion of the waveguide comprises an elastic material.
- 13. (Currently amended) The display element according to claim <u>1 [[2]]</u>, wherein at least a portion of the waveguide comprises a transparent gel.
- 14. (Currently amended) The display element according to claim 1 [[2]], wherein the actuators are formed for each of a plurality of pixels pixel.

15-21 (Canceled)

22. (Currently amended) The display element according to claim 15, A display element comprising a light source and a waveguide that propagates a light emitted from the light source, wherein the light propagated in the waveguide is extracted to outside from a waveguide lateral face, and

wherein the waveguide comprises a waveguide electrode film on the waveguide lateral face.

the display element further comprising an opposing electrode film being opposite to the waveguide electrode film, and

particles arranged between the waveguide electrode film and the opposing electrode film,

wherein by applying a voltage between the waveguide electrode film and the opposing electrode film, the particles and the waveguide electrode film are brought into contact such that the particles and the waveguide become integrated, changing the shape

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of the waveguide lateral face and extracting the light out of the waveguide from the waveguide lateral face, and

wherein the particle is fluorescent.

- 23. (Original) The display element according to claim 22, wherein the light source emits ultraviolet light.
- 24. (Previously presented) The display element according to claim 1, wherein the light source is a 3-color LED or a 3-color laser.
- 25. (Currently amended) A display device comprising: the display element according to claim_1,
 - a light source drive circuit for driving the light source,
 - an actuator drive circuit for driving the actuator, and
- a control circuit that controls the light source drive circuit and the actuator drive circuit.
- 26. (Currently amended) A display device comprising:

the display element according to claim 22 [[15]],

- a light source drive circuit for driving the light source,
- a particle drive circuit for applying a voltage between the waveguide electrode film and the opposing electrode film, and
- a control circuit that controls the light source drive circuit and the particle drive circuit.
- 27. (Original) A display device comprising: the display element according to claim 14, and an active matrix element that controls the respective actuators.
- 28. (Currently amended) A display device comprising:

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the display element according to claim 22 [[21]], the waveguide electrode film and the opposing electrode film being provided for each of a plurality of pixels, and

an active matrix element that controls respective voltages between the waveguide electrode films and the opposing electrode films.

- 29. (Original) The display device according to claim 27, wherein the active matrix element is a TFT or a TFD.
- 30. (New) A display device comprising:

the display element according to claim 23,

- a light source drive circuit for driving the light source,
- a particle drive circuit for applying a voltage between the waveguide electrode film and the opposing electrode film, and
- a control circuit that controls the light source drive circuit and the particle drive circuit.